



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

THE GEOGRAPHICAL REVIEW

VOL. X

OCTOBER, 1920

No. 4

MADAGASCAR

By GUILLAUME GRANDIDIER

Secretary of the Geographical Society of Paris

Madagascar, situated to the southeast of Africa, appears at first glance to form a dependency of that continent, whence the name Great African Island by which it is not infrequently known. But the designation conveys an erroneous idea, for this new colony of France is a little continent in itself, isolated from the rest of the world and preserving in its isolation relics of a vanished geological age. Its soil, animals, plants, peoples all have a distinguishing characteristic: they are Malagasy. In a word, Madagascar is biologically an entity—a whole on which a complete monograph might be written without reference to neighboring regions save by way of comparison. And this constitutes not the least of the charms that make the island so alluring a subject of study.

THREE MAJOR NATURAL REGIONS

Madagascar, covering an area of 228,000 square miles, is somewhat larger than France. The island exhibits a very diversified relief. The eastern and central portions comprise granitic terrains, the western coastal region is predominantly calcareous. The culminating elevations of the island, nearly 3,000 meters (over 9,000 feet), are found in the extinct volcanoes of the north and center. The distance between the most northerly point (Cape Amber, latitude 12° S.) and the southern extremity (Cape St. Mary) being approximately 1,000 miles, the island belongs as regards climate in part to the tropical, in part to the temperate zone. Hence it is not surprising to find in Madagascar a variety of regions quite distinct in regard to the flora and fauna and in the mode of life of their inhabitants.

Three major natural regions may be recognized: the Central Massif, or Central Plateau; the Eastern Coast Chain, which descends more or less abruptly to the Indian Ocean; and the Plains region of the south and west, sloping gently to the shores of the Mozambique Channel.

THE CENTRAL PLATEAU

The Central Plateau, as it is commonly called, occupies about one-quarter of the island and includes the regions of Imerina and Betsileo in their entirety. It is a chaotic mountain mass having a mean altitude of 1,200 meters. The recent eruptive material excepted, it is formed of primitive rocks, in part exposed, in part covered with the product of decomposition—the red argillaceous earth known as laterite. Because of its deficiency in plant food the red earth forms a poor soil from the agromomic point of view. Furthermore, the region is very arid, and cultivation succeeds only in the depressions naturally humid or irrigated from the watercourses.

But on the other hand the climate is good. The temperature is agreeable to Europeans.¹ Malarial sickness is rare and where it exists is seldom of a grave nature. This is the most populous region. The immigrant Malays, progenitors of the Hova, shunning the unhealthy districts of the eastern coast, sought refuge here. Here are the largest towns, such centers as Antananarivo and Fianarantsoa. Here Europeans can both live and work.

THE EASTERN COAST CHAIN

The Central Plateau of Madagascar extends over a little less than half the breadth of the island. The long coastal chain which separates it from the Indian Ocean occupies only one-fifth, having a width of some 80 kilometers. This chain, the second of our regions, has a north-northeast to south-southwest orientation closely bordering the shore from which it rises by successive steps to an altitude of 1,000 to 1,500 meters. A sandy zone more or less broad gives place to hilly ground, 20 to 50 meters high and characterized by a special type of vegetation which includes the traveler's-tree (*Ravenala madagascariensis*); the vacoa (*Pandanus utilis*); and the raffia (*Raphia ruffia*), the palm whose graceful fronds furnish fiber for rope weaving.

Above these low hills commence the mountains proper. The climate is warm, moist, equable, and favorable to the growth of a luxuriant vegetation.² Patches of virgin forest still remain scattered over the entire eastern slope, though much destruction has been wrought by the native cultivators who have burned over extensive areas. Just under the summit, however, there stretches along the entire length of the island a continuous band of magnificent forest abounding in valuable plants, in tree ferns and orchids.

¹ The average annual temperature of Antananarivo (1400 m.) is 62° F., the extreme months being February, 67° F., and July, 55° F. (Julius Hann: *Handbuch der Klimatologie*, 3 vols., Stuttgart, 1910; reference in Vol. 2, p. 130.)

² The mean annual temperature of Tamatave, on the eastern coast, is 74° F., the extreme months being February, 80° F., and July, 68° F. The mean yearly rainfall is 115 inches.

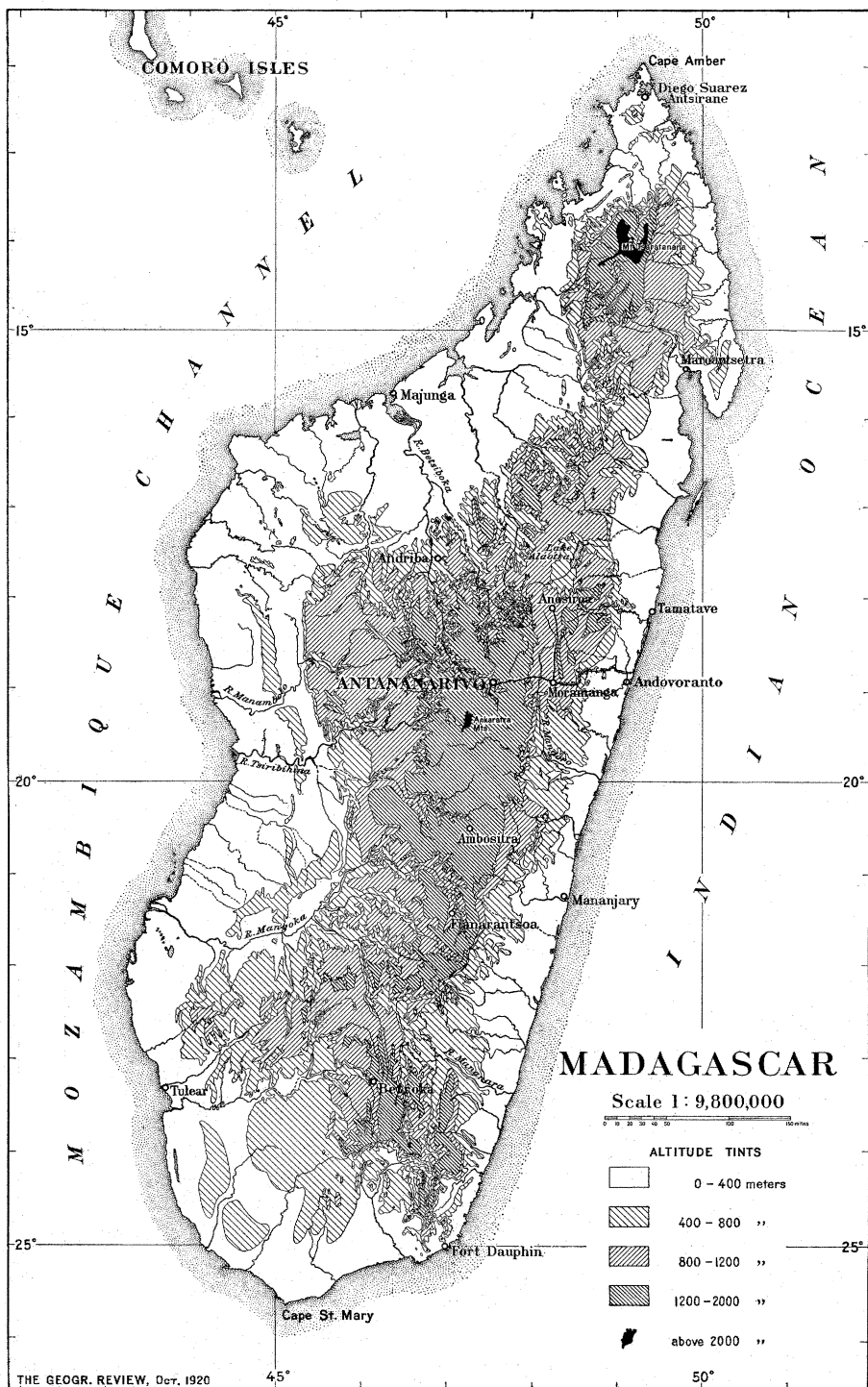


FIG. 1—Relief map of Madagascar. Based on Carte hypsométrique de Madagascar, by E. F. Gautier, 1902.



FIG. 2—Porters stopping for a meal by the roadside. A typical landscape in Imerina—rolling moorlike hills covered with short grass.

THE WESTERN PLAINS

The western region differs completely from those of the center and the east. In place of a chaos of mountains whose compact red soil supports either a verdant vegetation as in the east (where is a layer of humus, at once the product and in part the cause of the vegetation) or a meager growth of scant grass as in the center, here in the west are plains, gently rolling, calcareous or sandy, clothed in tall grass with palm forests and clumps of woodland. This is a region adapted to grazing, and herds of cattle are numerous.

The southern region presents the similar aspect of a slightly diversified plain, except in the eastern part which is broken by tolerably high hills. The south, however, is characterized by very great aridity, especially in the territories occupied by the little tribes known as the Antandroy and Mahafaly. In the vicinity of Cape St. Mary, for example, the numerous inhabitants are dependent on rain water as their sole source of supply, and sometimes rain falls only at intervals of many months. In this part of Madagascar all forms of life, the plants in particular, are adapted to a condition of drought, and in consequence the country wears a strange aspect comparable only to certain desert sections of Mexico and Central Africa.

The People: Their Distribution and Origin

The population of Madagascar is very unequally distributed, and the density is low. Although no exact census has been taken outside of the provinces of Imerina and Betsileo the total population of the island may be estimated at 3,500,000,³ less than one-tenth the population of France. Of the total number the inhabitants of the Central Plateau, the Hova and the Betsileo, account for more than 1,000,000, and those of the eastern coast region for about 400,000.⁴

Today the people of Madagascar are collectively known as Malagasy, a name of foreign origin and comparatively recent introduction. Originally the islanders were divided into an infinity of little tribes, or one might rather say clans, absolutely independent of one another, each obedient only to its own chief. Connection between them was limited to frequent and reciprocal raiding for cattle and slaves. It was not until after the arrival of successive bands of immigrant peoples—Arabs, Indians, Malays, and Europeans—that the independent clans began to group themselves into larger bodies. The tendency towards grouping, however, has progressed apace especially since the eighteenth century, and there have thus been constituted the 17 principal peoples or tribes as they exist

³ The official estimate for 1918 is 3,545,575 according to the figures quoted in *Suppl. to Commerce Repts.*, Ann. Series, 1920, No. 72 b, p. 10.—EDIT. NOTE.

⁴ According to Lieut. Éd. de Martonne (*La densité de la population à Madagascar*, *Ann. de Géogr.*, Vol. 20, 1911, pp. 77–85; map) seven-tenths of the colony has a population of less than 12 to the square mile; one-tenth only has a population of over 25 to the square mile.



FIG. 3



FIG. 4

FIG. 3—On the road from Tamatave to Antananarivo: crossing the eastern wall of the central plateau by the pass of Angavo.

FIG. 4—Road through the spiny bush of Androy ("country of spines"), southern Madagascar. The vegetation of this subdesertic region is in complete contrast with that of the rest of the island.



FIG. 5



FIG. 6

FIG. 5—Wells in the dunes of the Mahafaly coast, southern Madagascar. Rain falls only two or three times a year, and all human life and activity is strictly dependent on the wells. Their stock is the chief resource of the population.

FIG. 6—Antandroy encampment on the shore near Cape St. Mary.

today. Of these the most important are the Hova, Betsileo, and Bara occupying the center of the island; the Antankarana in the north; the Betsimisaraka, Betanimena, and Antimorona in the east; the Antanosy, Antandroy, and Mahafaly in the south; and the Sakalava in the west.

THE MERINA OR HOVA

Amongst the divers tribes one proved itself more intelligent, better disciplined, and more powerful than the others so that it eventually succeeded in establishing effective

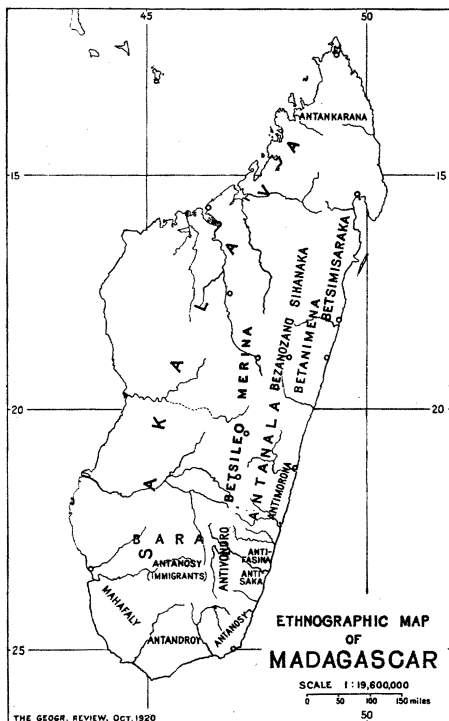


FIG. 7.—Ethnographic map of Madagascar. The principal Malagasy tribes are shown. For details of distribution see: Alfred and Guillaume Grandidier: *Histoire physique, naturelle et politique de Madagascar*, Ethnographie, Vol. I.

dominion over more than half the island, while by a system of posts or skillfully distributed forts the other half was kept in check. Furthermore, for a century this tribe maintained a determined resistance to both French and English influence, playing off the one against the other, determined to yield to neither. This is the people known as Hova. They occupy the center of the island, Imerina, and have their capital at Antananarivo.

As a matter of fact the name Hova as applied in this sense to the population of the central plateau is erroneous. The Hova are only one of the three castes composing the Merina—the *Andriana*, or nobles; the *Hova*, or free men; the *Andevo*, or slaves. But this usage has prevailed, and hereafter we shall employ Hova to designate the entire population of Imerina.

UNIFORMITY OF LANGUAGE AND CUSTOMS

The traveler in Madagascar is invariably struck by the uniformity of the native customs and especially by the unity of the language—surprising circumstances when one considers that until recently intertribal communication was limited to plunder and raid. Yet throughout the length and breadth of the island we find a single speech varying from place to place only in pronunciation and in the words of foreign origin introduced by immigrant peoples or substituted for others whose usage has been

locally tabooed. This phenomenon has long been noted by sailors and travelers, who have further remarked the connection between the Malagasy tongue and Malayo-Polynesian dialects; but they failed to draw the conclusion, logical as it is, that the mass of the Malagasy have come from the Far East bringing their language with them. An explanation indeed had been sought in the supposition that the Andriana, who are generally known to be of Malay origin and who have imposed their authority on the Imerina and the neighboring regions, had at the same time imposed their language not only on these conquered peoples but also on all the other tribes of the island. On grounds that have already been suggested, and in the light of other facts, such an hypothesis is unacceptable.

MALAYO-POLYNESIAN AFFINITIES OF MALAGASY

Although the Malayo-Polynesian affinities of the Malagasy language⁵ have been recognized since the discovery of the island the blood relationship of the people with the Oceanic negroes, which agrees as well in respect of their physical characteristics and culture as their language, had never been affirmed or even suspected until deduced by Alfred Grandidier from his travels of 1865-1870.⁶ As a matter of fact all the Europeans who had been in touch with Malagasy peoples, other than the Andriana and the chiefs of the principal tribes, had been struck by the color of their skin which is very dark without being the fine ebony black of the Senegalese and Sudanese. They drew the conclusion that the bulk of the Malagasy were African negroes, overlooking the fact that in Asia and Oceania there exist black peoples ethnically far more closely related to the natives of Madagascar.

One of the chief reasons for the general acceptance of an African origin for the Malagasy lies in the geographical situation of the island. Africa is comparatively near, and it seems natural enough that this continent should have furnished the first occupants of Madagascar. On the contrary the island world of the East is at an enormous distance, insuperable for primitive peoples—or so it may seem to those unacquainted with the regimen of the winds and currents of the Indian Ocean and with the history and customs of the Indo-Melanesians. The negroes of the coast of Africa, who are very poor mariners, do not venture on the high seas, and, furthermore, the currents in the Mozambique Channel are unfavorable to west-to-east crossing. On the other hand the Indo-Melanesians are excellent navigators, and the equatorial currents of the Indian Ocean bear directly on Madagascar. Pumice stone from the famous Krakatoa has been found

⁵ As will be described later the Andriana are fairly pure-blood Malays whose forefathers arrived in Madagascar in the sixteenth century. The Malagasy language belongs to an early branch of the Malayo-Polynesian family.

⁶ An appreciation of Alfred Grandidier's work on the ethnology of Madagascar may be found in the article "Madagascar," by W. H. Hunt, *Bull. Amer. Geogr. Soc.*, Vol. 32, 1900, pp. 297-307. For details of Madagascan ethnology see Alfred and Guillaume Grandidier: *Ethnographie de Madagascar*, 3 tomes, Paris, 1908, 1914, 1917 (constituting Volume 4 of "Histoire physique, naturelle et politique de Madagascar, publiée par A. et G. Grandidier," 59 vols., Paris, 1876-).

on the eastern shores of Madagascar and even further afield. It has, for instance, been reported from Port Elizabeth and mingled with it were seeds of *Barringtonia speciosa*. And historic examples are not wanting to show that man too can be carried westward by these currents.⁷ At



FIG. 8—A Hova functionary and his wife. The upper classes of the Hova, the *Andriana*, are comparatively pure-blood Malay.

the beginning of the nineteenth century a Malay junk, caught by a storm off the Sunda Islands and carried westward, came to land at Tamatave.

THE QUESTION OF AN ABORIGINAL POPULATION

The question then arises as to whether the first Indo-Melanesian arrivals on Madagascar found the country empty or in the occupation of an abo-

⁷ The outrigger canoes of Madagascar and the east African coast are derived from two forms both originating in Java. James Hornell: *Les piroques à balancier de Madagascar et de l'Afrique orientale*, *La Géographie*, Vol. 34, 1920, pp. 1-23.—EDIT. NOTE.

iginal population. No certain answer can be given, but if the island was indeed peopled the occupants must have been few in number and in a low state of civilization for they have left no trace either in culture or language.⁸

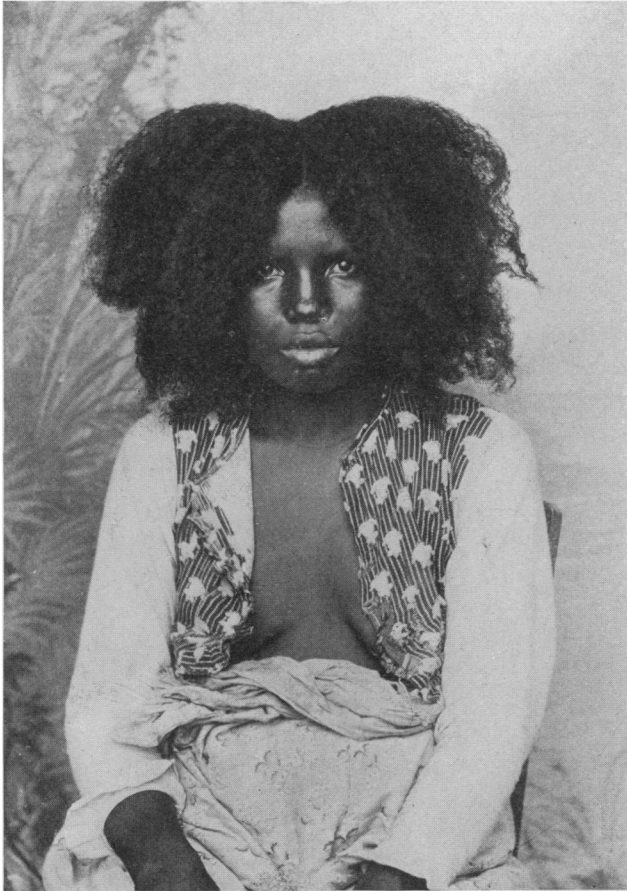


FIG. 9.—Sakalava woman, hair loosened according to the custom in mourning. The Sakalava, occupying the western section of Madagascar, are one of the tribes descended from the early Indo-Melanesian immigrants who may be considered the basis of the Malagasy peoples.

⁸ In "The Bantu in Madagascar" (*Journ. African Soc.*, London, Vol. 19, 1920, pp. 305-316) Emil Birkeli claims the recognition in western Madagascar of two different racial groups "both belonging to a low Negro type." Birkeli spent several years among the Wazimba of the Tsiribihina and Manambolo Rivers and also carried his investigations among the Bausi of the highland fastnesses of Bemara. The former are described as "lake dwellers" showing connections with fishing tribes of African origin, the latter as "cave dwellers" exhibiting parallel features with the forest people of eastern and central Africa and with the Bushmen. From the Wazimba Birkeli collected "tribes' names and traditions, special religious customs, list of words for utensils and plates, names of persons and places, and fragments of songs and prayers; all in a 'foreign' language, incomprehensible to the people of today." Fragments of ancient language were also collected among the Bausi. In an accompanying note Sir H. H. Johnston states as a conclusion that "the present mainly Indonesian population of Madagascar were almost certainly preceded by a Negro race." How such a people reached Madagascar remains a problem.—EDIT. NOTE.

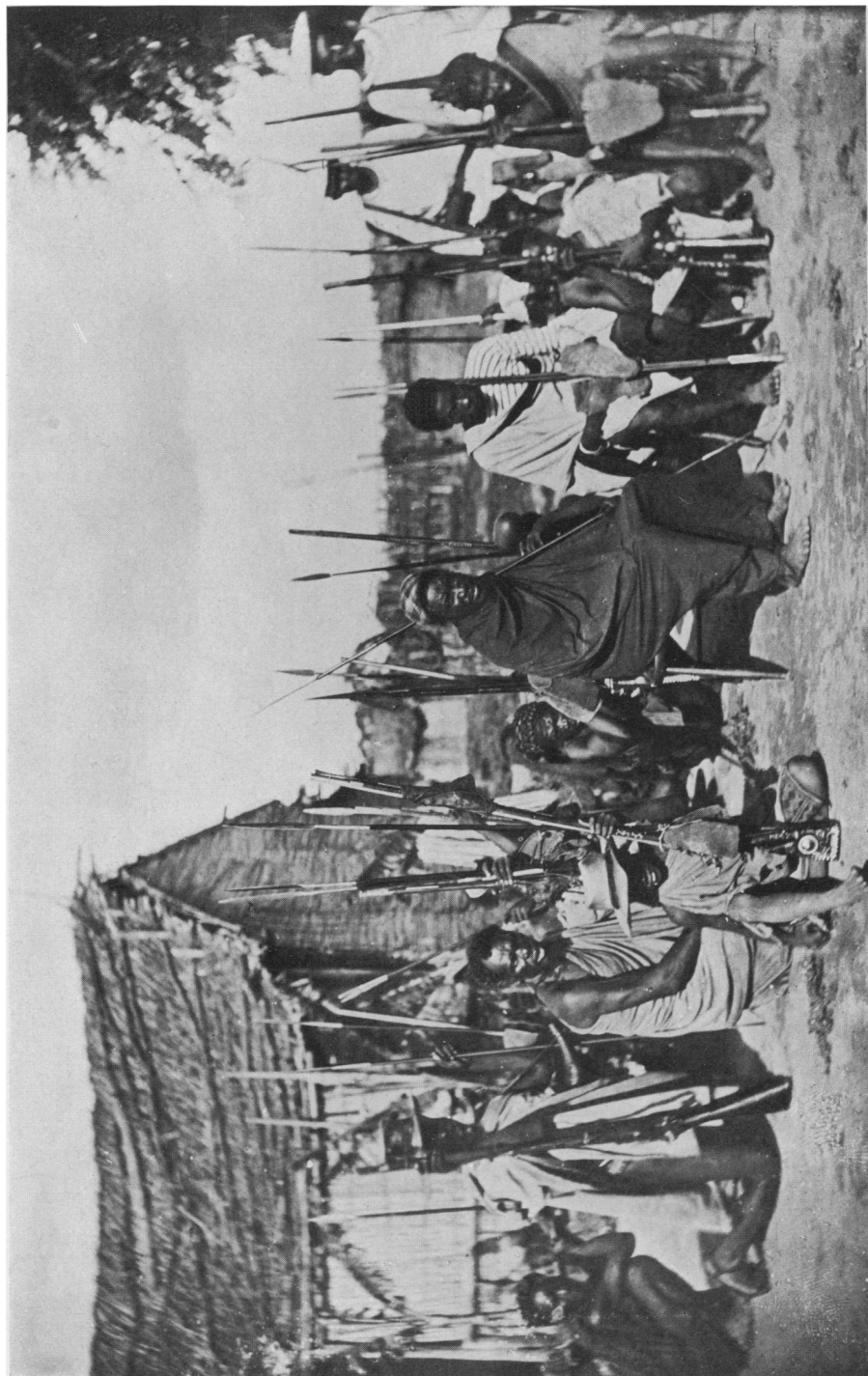


FIG. 10.—The Bara King, Impoinimerina, and his court, Fiherenana, a district of southwestern Madagascar. The Bara are amongst the least civilized peoples of Madagascar. Spear and gun proclaim their warlike attributes.

The Indo-Melanesian element may then be considered the basis of the Malagasy population. To it has been added another eastern strain by the Malay immigration of the Middle Ages. There is no doubt that the Andriana, or nobles, of Imerina are of pure Malay race. Anthropological study proves this in the clearest manner. At first glance it is impossible to distinguish a pure-blood Andriana from a Javanese. Andriana who went to Paris for the World's Fair of 1900 were invariably referred to by the man in the street as Indians and never as negroes.

The Malay immigrants soon abandoned the eastern coast, driven out either by the occupants or the insalubrity of the climate. They sought refuge in the inhospitable region of the central plateau scantily peopled by Wazimba. Superior in intellect and ability they gradually rose to a position of dominance over the peoples among whom they settled. The story of their progress, of the foundation and development of the Hova state, is not without interest for it explains the history of the conquest of the island by France.

Development of the Hova State

Early in the seventeenth century the Hova State, though restricted in extent, appears to have been firmly established. Ralambo, the second king of the Hova dynasty, had conquered Antananarivo, and with the fertile basin in which it lies, one of the granaries of Madagascar, it became the center of the kingdom. Ralambo gave special attention to the extension here of rice cultivation, the staple of Malagasy existence. Andrianampoinimerina, with whom the historic period proper may be said to begin, augmented the kingdom by the subjugation of the Sihanaka and the Betsileo, thus obtaining definite mastery over the central region. These peoples, however, though conquered were not subdued; and from his ascent to the throne his son and successor Radama I (1810-1828) was called upon to suppress rebellions among the Bezanozano and Sihanaka who sought to regain their independence. More significant, however, was the turn taken by external affairs—the arrival of English agents who entered into competition with the old established French interests.

CONTACTS WITH EUROPEAN CIVILIZATION

Under Radama the Hova were definitely brought in touch with European civilization. The sovereign devoted himself in particular to the furthering of education, opening schools for the instruction of adults as well as children. He sent nine young Hova to England to learn the more important trades, and many English artisans, among them the carpenter Cameron, were brought into the country. A practical result was seen in the progress of bridge building. For himself he had built by a French carpenter, Legros,

the pretty little palace Trano Vola ("silver house") and a country house at Soanierano, south of Antananarivo.

This taste for certain material products of European civilization was shared by Radama's successor Queen Ranavalona I, who erected the first great building in Madagascar, the Manjaka miadana ("reigning in peace



FIG. 11—A carrier of rush mats, eastern coast of Madagascar.

and prosperity"), an imposing monument and the most striking feature of Antananarivo, today dominating the humbler brick and wooden structures perched on the hillsides of this picturesque and strategic site. Under Ranavalona, Hova power and prestige was greatly strengthened. Antananarivo itself, which had hardly 15,000 inhabitants in 1853, boasted a vastly larger population at this time swollen by the presence of a garrison of 12,000 soldiers—a measure of the military expansion needed to keep pace with the ever-widening frontiers.

A REACTIONARY QUEEN

But in spiritual matters Ranavalona proved reactionary. In 1835 she began persecution of the Christians. Observances of the Christian church were forbidden, and penalty of death was proclaimed for those natives who professed Christianity, unless the "heresy" was renounced. Suspects



FIG. 12—Player of the *valiha*. This curious native guitar is made from the ultra-useful bamboo.

were subjected to the ordeal of the *tanghin*, or poison ordeal.⁹ The *mpiva-vaka*, the native priests, were driven from Imerina, and the English missionaries likewise were expelled. "Blood—and always blood—is the maxim of Queen Ranavola, and every day seems lost to this wicked woman on which she cannot sign at least half a dozen death warrants."¹⁰ On the

⁹ "The Tangéna is a small and handsome tree growing in the warmer parts of the island, and the poison is procured from the nut of its fruit" (James Sibree: *The Great African Island: Chapters on Madagascar*, London, 1880, p. 281).

¹⁰ *The Last Travels of Ida Pfeiffer*, New York, 1861, p. 212.

succession of her son Radama II in 1861 this retrograde policy was abandoned. Radama was the friend and pupil of the Frenchman Laborde, a man of great energy and resource, who was shipwrecked on the island in 1831 and remained there, figuring prominently for half a century in Madagascan affairs. Radama invited Europeans to Madagascar and sanctioned measures for European colonization. He opened schools and encouraged the preaching of Christianity. Catholic and Protestant missionaries alike were welcomed and given permission to establish churches in Antananarivo, a liberal attitude that roused the hostility of a part of the old régime. At the same time Radama II wrecked the stability of his kingdom by his lapse into a life of pleasure and debauchery. Retiring to the famous *Trano Vato* ("stone house") he abandoned the country to the rule of favorites. Before long rebellion was provoked in which the King was killed.

OPPOSITION TO FRENCH INFLUENCE

His widow Rabodo was proclaimed Queen under the name of Rasoherina, but the effective rule was in the hands of the Prime Minister as in fact continued to be the case under subsequent queens. Rasoherina's first Prime Minister was strongly opposed to French influence. When in August, 1863, Commander Dupré arrived with the Franco-Malagasy treaty, which had been prepared by Radama II and signed by Emperor Napoleon III, he found the new Prime Minister set against ratification. This involved the charter of the Madagascar Company previously granted to the Frenchman Lambert who had arrived simultaneously with several engineers to engage in the enterprise which was of an industrial and commercial character. Later an indemnity of 1,200,000 francs was obtained for the breaking of the charter. As a result of the incident, however, bitter feeling was aroused, and even after the exile of this minister English influence remained in the ascendant.

A treaty with England was signed in 1865 while efforts were still in progress to make the proposed treaty with France an accomplished fact. Comte de Louvières, sent to take up negotiations, met with an unfavorable reception. On landing he found that an edict had been promulgated prohibiting the sale of lands to Europeans and that the Malagasy army had been ordered to be in readiness in the event of war. During the course of the protracted negotiations that ensued the French plenipotentiary died. Before his successor arrived a treaty was signed with America analogous to that with England; but at last, in 1868 shortly after Queen Rasoherina's death, signing of the French "Treaty of Peace and Commerce" was effected.

Towards the end of the reign of Rasoherina's successor, Ranavalona II, trouble between France and the Malagasy government became acute, the crisis in particular arising over the attitude of the Hova towards the Saka-lava of the northwest over whom France claimed a protectorate. Military



FIG. 13



FIG. 14

FIG. 13—Antananarivo is built on a long and lofty hill rising above flat rice plains. The most conspicuous feature of the town is the great palace, Manjakia miadana, about 100 feet long by 65 feet broad and 120 feet in height. To the north (left) is the Trano Vola. The great palace has been converted into a museum.

FIG. 14—The parade ground, Mahamasina, at the western foot of Antananarivo, and the little lake of Anosy.

intervention ensued and finally the Hova came to terms. A treaty establishing a French protectorate over Madagascar was ratified early in 1886, and a Resident was appointed, M. Le Myre de Vilers. The political situation however was not permanently cleared, although no open breach occurred for some years. Then one day several Frenchmen were assassinated, and it became obvious that war was imminent. To avoid so grave a contingency an attempt at conciliation was made anew by Le Myre de Vilers; but his overtures failed, and he with his compatriots withdrew from Antananarivo.



FIG. 15—A village of Imerina. On the barren upland of the central plateau the houses are built of adobe. The hard, compact red earth that forms so intractable a soil to the agriculturist offers, on the other hand, an excellent material for the mason—it has almost the solidity of stonework.

FRENCH INTERVENTION

An expeditionary force was organized under the command of General Duchesne. The marines were ordered to the immediate occupation of Tamatave, the chief port of the eastern coast, and of Majunga on the western coast. On February 12, 1895, the Queen held a solemn *kabary* in which she made an appeal to arms and decided to muster the Hova and Betsileo. On May 6 General Duchesne and the expeditionary force arrived at Majunga. Landing proved difficult; provisioning of the troops required construction of a cart road; arduous labor in a trying climate exacted a considerable toll from the troops although no enemy resistance was encountered for some 170 kilometers south of Majunga. Here a Hova force was routed, and General Duchesne proceeded with little opposition. A flying column was formed to cross the Ambohimena Mountains, the natural protective wall of Imerina. After some skirmishing the column

reached a point overlooking Antananarivo and the Betsimitatatra, the vast marshy plain out of which rises the hill upon which the capital is built. Turning eastward the little troop, without a blow, took Ambohidempona, some kilometers from the capital which from this point was within artillery range. The movement proved entirely successful. For defense reliance had been placed on the marshy plain which is one immense rice field, and the turning of the French force to the eastward was construed as a retreat. The appearance of the French troops at Ambohidempona took the populace by surprise. The first cannon shot paralyzed them with fear, and when



FIG. 16—A village in eastern forest belt, Vinanitelo, east of Fianarantsoa. The forest provides the material—bamboo, raffia, etc.—for construction of the houses.

presently a shell dropped near the palace the Queen hastened to raise the white flag. Thus ended the campaign.

REBELLION

On October 1, having installed himself in the Residency, General Duchesne contracted a treaty of peace. On the arrival of M. Laroche as Resident General the treaty which was reciprocal in character was modified into an act binding the natives to acknowledge the French protectorate over the island. But peace proved to be of short duration. Discontented Hova rose in rebellion, attempting a revival of their ancient pagan cult in the rural districts. A missionary, the Rev. W. Johnston, and his wife and daughter were killed. The insurrection was quelled, the Prime Minister exiled, and General Duchesne believing quiet restored left the country under the control of the Resident General. Then trouble broke forth again. The Hova had continued secret preparations for a "holy war," and Imerina from north to south was shortly aflame with insurrection in the course of which several Europeans were massacred.

THE ADVENT OF GALLIENI

In August, 1896, France sent to Madagascar General Gallieni the valiant soldier and skillful administrator who had played so remarkable a part in French West Africa and in Tonkin. Gallieni reached Antananarivo in September to find all Imerina in open revolt. The situation was extremely bad. It had been still further aggravated by the sudden abolition of slavery, lightly pronounced by M. Laroche, and by the antagonism between the Protestant and Catholic missions. Without delay Gallieni summoned the Queen, who visited him as a vassal of France. Although without actual authority the Queen acted as the center of rebellion; hence it was deemed advisable to exile her, and shortly afterwards she was sent to Réunion. Meanwhile Gallieni proceeded to the pacification of the country.

In the campaign of 1895 the French troops had advanced from the coast toward Antananarivo. The pacification of 1897 progressed from Antananarivo as center towards the coast by the procedure known as the "oil stain." From a strongly fortified center are deployed a series of little posts whence pacification is extended in ever-widening circles. Thus Imerina was progressively occupied without the striking of a blow, the more easily so by reason of the policy of lending resources and financial help instead of extorting tribute as under the native régime.

Progress of Pacification

In the first half of 1896 only certain parts of Imerina and Betsileo were occupied. At the end of this year the French were masters of these two provinces with the two supply routes leading to Tamatave and Majunga respectively. By October, 1897, France had control over the entire north of the island, the province of Bara, and a coast zone extending to the southeast as far as Fort Dauphin. By the end of the year there remained only the extreme south and some points in Menabi on the western slope, and their conquest was completed in 1901-1902.

The method of pacification is described by General Gallieni himself¹¹ in one of his reports in which he addresses his subordinates significantly enough as his collaborators.

The best method of pacification is to be found in the joint use of force and policy. In colonial campaigns destructive force should be used only in the last extremity and even then only that reconstruction may be the better. The country and its inhabitants should be treated with the utmost circumspection for it is to be the scene of colonization in the future, and its peoples will be the chief agents and associates in our enterprises to be undertaken therein. On every occasion when the exigencies of war compel a colonial officer to proceed against a village he should keep in clear view that, submission being secured, the first step is reconstruction of the village, creation of a market, establishment of a school. It is by this joint action of policy and force that pacification is accomplished and the way paved for the organization to which it later gives place.

¹¹ Compare the description of General Lyautey's pacification of Morocco, by Alfred de Tarde, in "The Work of France in Morocco," *Geogr. Rev.*, Vol. 8, 1919, pp. 1-30. Lyautey served under General Gallieni in Madagascar.

ROADS AND RAILROADS

While the troops were extending the limits of French authority workmen were engaged in road building to put the interior in connection with the sea, a task formidable enough under the conditions of climate and topography, especially on the eastern side of the island. Here an admirable system of roads now testifies to the triumph of the indomitable colonial spirit over the gloomy prognostications of friend and foe alike. On the



FIG. 17—A house of the eastern region; walls of bamboo.

western side, too, where surface and rainfall offer better conditions for road making and preservation, effort has been not less considerable.

In connection with the development of ways of communication note must also be made of the railroads, of which the chief is that from Tamatave to Antananarivo. In such a country as Madagascar the railroad is an important instrument of civilization. The course of construction provides large numbers of natives with a training of considerable industrial and moral value. When completed, the railroad furnishes a unique means of breaking down the barriers that isolate the native races and prevent the fusion of their common interests. On the economic side the Antananarivo-Tamatave railroad has provided an outlet for the best part of Madagascar. Imerina, isolated by nature, is the home of some million people, industrious and intelligent; who are, furthermore, the government's best auxiliaries for the economic and social development of the littoral and intermediate zones.



A



B

FIG. 18 A and B—Production of rice, food staple of the Malagasy. A. Oxen used in trampling the soil to prepare it for rice planting. B. Transplanting the rice. This is done after the summer rains have commenced (October and November).



C



D

FIG. 18 C and D—Production of rice. C. Terraced rice fields on a hillside in the Betsileo country. D. Transport of rice by canoe, vicinity of Antananarivo.

General Gallieni was not less occupied with the political and administrative sides of pacification. As order was established laws were framed to meet the requirements of the new situation. By a decree of October, 1898, a judicial service was instituted. Although the system is susceptible of improvement, nevertheless it has proved well adapted to native needs and has contributed no little to attach people to French authority. To give an idea of progress in this direction we may instance the following case. During the last days of the dictatorship of Rainilaiarivony, an uncle of Queen Ranavalona III, formerly a butcher and completely illiterate, was Keeper of the Seals of the Malagasy Government. A subordinate was charged with the august commission of guiding his hand when his signature was required!

PUBLIC INSTRUCTION

From modest beginnings, since the first schoolmasters were soldiers, heads of isolated posts scattered here and there through the island, public instruction has become one of the important departments of the present administration. Long before, it is true, missions of various nationalities had opened schools, but the instruction provided was essentially sectarian in character. As soon as the colony had at its disposition the necessary funds it not only drew up an official course of study for the free schools but also founded "government schools," which were strictly nonsectarian. The government schools are largely vocational, laying stress upon instruction in industry and agriculture and also in the French language. The professional school of Antananarivo under direction of the Department of Public Works has already trained tanners, weavers, potters, blacksmiths, watchmakers, jewelers, cabinetmakers, etc. That the students have gained a thorough knowledge of their trades has been proved by their work in the governmental shops, in their employ by private individuals, and in the businesses which they have set up on their own account. In 1914 the number of schools had grown to about 2,000 with over 150,000 pupils.

IMPROVEMENTS IN AGRICULTURE

One of the most striking results of French occupation is the immense impetus that has been given to native cultivation. Suppression of slavery had for its first result an increase in the number of landowners. Whereas formerly a free man and his slaves cultivated an area just sufficient for their support, emancipation released a large body of workers who took up unoccupied parcels of land to which they acquired proprietary title in return for rendering them productive.

If today in certain districts of the central region the price of rice has fallen to a few cents a *vata*, or double decaliter, it is because one no longer finds marshes with their stagnant waters. Every valley is drained, ir-

rigated, and converted into rice fields. As for the hillsides they are transformed with their cultivations of manioc, white and sweet potatoes, and groundnuts.

LABOR

A vital question for every colony is that of labor. In Madagascar although not superabundant it suffices for present needs. Recruits, except in Sakalava where the population is sparse, respond readily to regular pay and good treatment. Yet, looking to the future the French government is not satisfied with the present sparseness of the population, which,

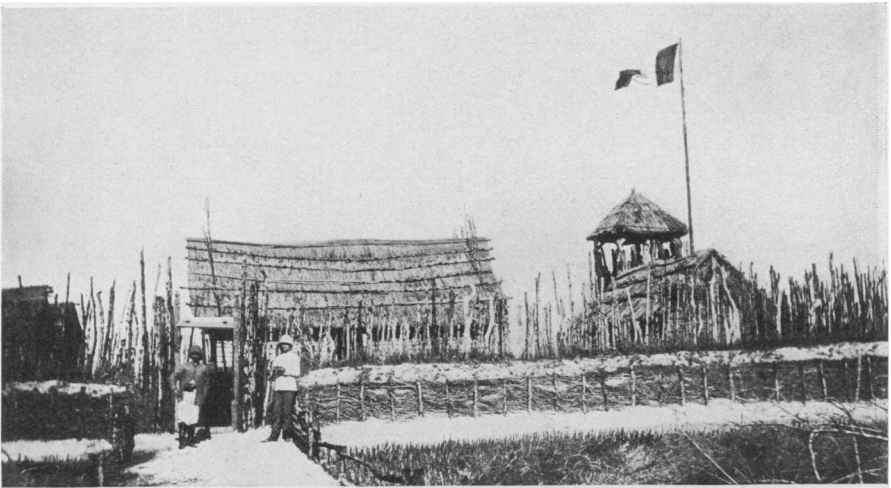


FIG. 19—A French fort in the western region of Madagascar.

as has been said before, numbers not much over 3,000,000. The people of the central plateau, the Hova and Betsileo, who represent so large a proportion of the population, are remarkably prolific, and maternity is in honor among the young women. But the children, ill-nourished, ill-clothed, ill-cared-for generally, not infrequently victims of superstitious practices, die in such great numbers that the peoples of the central region as well as those of the coast were well on the way toward extinction when the French government intervened on behalf of their physical and moral welfare.

How can the number of Malagasy subjects be increased? The answer is simple enough. The excessive infant mortality must be stopped. Among adults smallpox, malaria, syphilis, tuberculosis, and various epidemic diseases must be combatted. Such contagious diseases as leprosy must be isolated, and the general conditions of material existence ameliorated.

A Pasteur Institute established at Antananarivo in 1900 has furnished enough vaccine to permit the physicians of the health stations to inoculate the general mass of population. Today one hears no more of smallpox,

that frightful malady significantly known among the Malagasy as *lavara* ("stay-far-away"). To second the efforts of the Bacteriological Institute of Antananarivo another station was established at Diego Suarez, and smallpox disappeared from the Sakalava and Antankarana. Thanks also to the Institute of Antananarivo the plague, while still prevalent in Mauritius and India, has disappeared from Tamatave and Majunga. Hydrophobia, the existence of which in Madagascar has been denied, has on the contrary claimed a number of victims. The reputation of the Pasteur Institute has spread, however, and one frequently sees natives who have made journeys of several weeks for treatment. In 1902, through the use of the serum provided by the Institute, an epidemic of diphtheria was under control in a few days. Steps are being taken towards control of malaria along the lines which have proved so successful in Cuba and along the Suez Canal and in the Panama Canal zone.

In fine the history of the nine years during which Gallieni had in hand the destiny of the Great Island,¹² is a veritable epic achievement in its military, administrative, economic, and financial aspects. It has all been accomplished not only to the glory of the mother country but to the benefit of the land itself, in accordance with the practice of the Romans, the conquering and colonizing people *par excellence*, of the "politique des races."

Thanks to Gallieni and his distinguished successors Madagascar is today "France Orientale." The native population has accepted French authority, not only without recrimination but with a gratitude that was expressed in 1916 when 42,000 Malagasy volunteered in defense of the mother country. What better proof could be asked of the work of French colonization in Madagascar?

¹² Joseph Gallieni: *Neuf ans à Madagascar*, Paris, 1908.